

(12) UK Patent Application (19) GB (11) 2 218 379 A

(43) Date of A publication 15.11.1989

(21) Application No 8810866.7

(22) Date of filing 07.05.1988

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(51) INT CL^{*}
B42D 15/00

(52) UK CL (Edition J)
B6E EC121 EEA

(56) Documents cited
GB 0563545 A
Argos Catalogue No 28 3rd August 1987 page 95
Item 24

(58) Field of search
UK CL (Edition J) B6E EEA, G5G G2
INT CL^{*} B42D 15/00

(54) **Folded sheet for attachment to a ring binder**

(57) A sheet (10) of material, for example a map, has a first set of concertina folds (12) and, so as to be transverse to these when the sheet is folded with these folds, a second set of concertina folds (14), the sheet (10) being provided with two diagonally opposite holding portions (16, 18) at segments (20, 22) thereof, which segments are at or near diagonally opposite corners (24, 26) of the sheet (10) and defined by fold/s (12, 14) and/or edge/s (28, 30) thereof, one (12) of the holding portions being stiff and the opposite holding portion (14) having a part (32) extending beyond the remainder of the sheet (10) when folded, so as to be suitable to be held in a binder (34). Said part (32) may be pre-bound in a book or may have punch-holes (38), suitable for a ring-binder. The material, apart from the stiff portion (16), may be of paper-like plastics material that is tear-resistant.

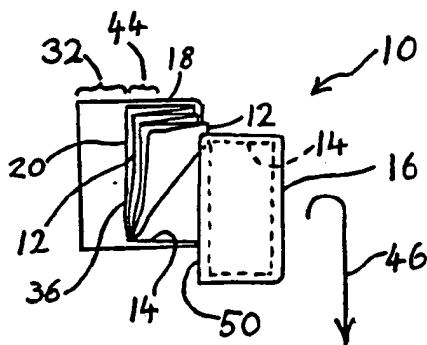


FIG. 1

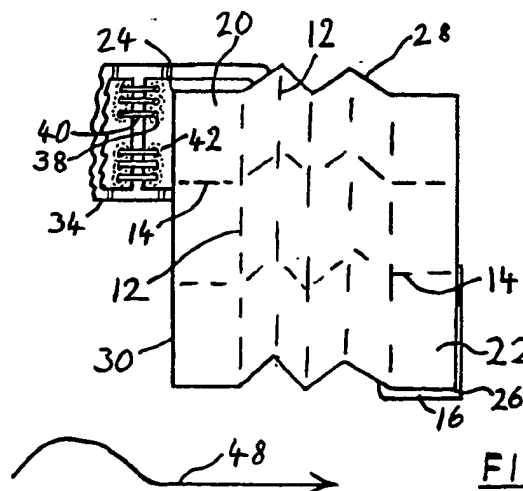


FIG. 2

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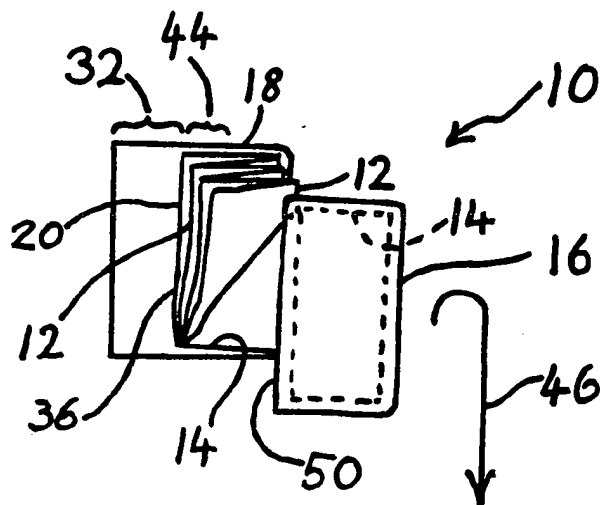


FIG. 1

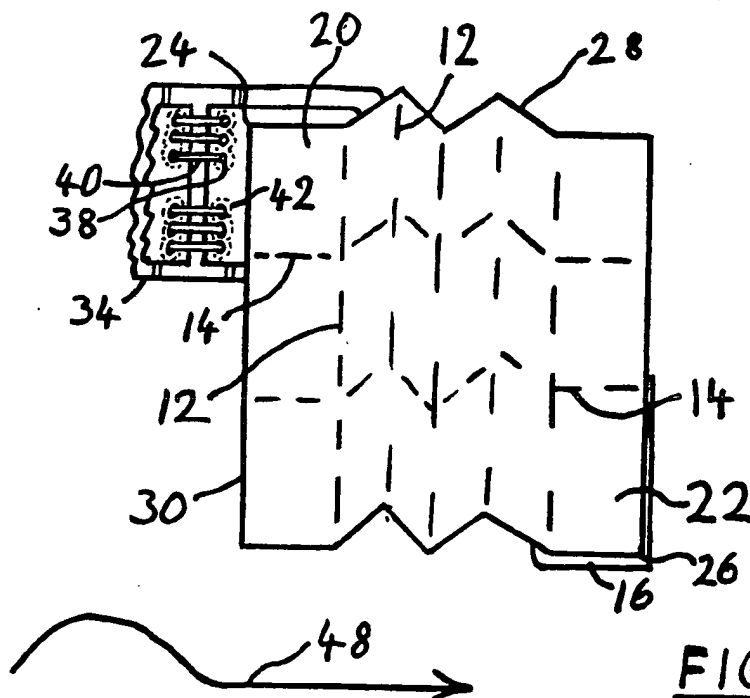


FIG. 2

TITLE "FOLDED SHEET"BACKGROUND

This invention relates to folded sheet material, regardless of whether it is in a folded or unfolded condition.

5 It is known from my earlier PCT Patent Application WO 87/04284 to provide a sheet of material (hereby defined as the "sheet material" defined in my said earlier specification, which definition is hereby intended by the expression "as hereinbefore defined") having a first set of concertina folds (which term means that the folds are
10 alternately towards and away from the front of the sheet) and, so as to be transverse to these when the sheet is folded with these folds, a second set of concertina folds, the sheet being provided with two diagonally opposite stiff portions at segments thereof, which segments are at or near diagonally opposite corners of the sheet and defined
15 by fold/s and/or edge/s thereof. This was intended for use by one stiff portion being held in the hand and the opposite stiff portion then being moved away from it to unfold the sheet with a single movement.

THE INVENTION

20 The inventor has appreciated that a sheet of this general type
-leaf
could usefully be engaged in a loose / or similar binder to provide a relatively small thickness at the spine or binding portion and yet open out to a considerable extent, far greater than with existing Z-shaped inserts for such binders, and in particular with a single
25 movement.

Accordingly, the present invention provides a sheet of material as defined in the accompanying claim 1. The term "binder" applies also

to a usual type of pre-bound book, as it will be readily seen that the single movement and large extent of opening would be a great advantage also with a bound printed book, for example.

Such a sheet can have any of the further features of claims 2 to 9 appended hereto and/or any of the further features disclosed in the description and/or claims of my said earlier specification.

DESCRIPTION OF THE DRAWINGS

Reference will now be made by way of example to the accompanying drawings, in which:-

Fig.1 corresponds to Fig.2 of my said earlier specification and shows a sheet embodying the present invention partly open; and

Fig.2 corresponds to Fig.4 of my said earlier specification and shows the sheet of an alternative embodiment of the present invention almost fully open.

Referring to the drawings, a sheet of paper 10 has a first set of concertina folds 12 and, so as to be transverse to these folds 12 when the sheet is folded with these folds into the position shown in Fig.1, a second set of concertina folds 14, the sheet being provided with two diagonally opposite holding portions 16,18 at segments 20,22 of the sheet 10, which segments are at or near diagonally opposite corners 24,26 of the sheet and are defined by folds 12,14 and edges 28,30 of the sheet 10. One of the holding portions 16 is stiff and the opposite holding portion 18 has a part 32 extending beyond the remainder of the sheet when folded, as seen in Fig.1, so as to be suitable to be held in a binder 34. The part 32 runs substantially the whole length of an edge 36 of the appertaining segment 20 and extends beyond this edge 36 which is also part of an edge 30 of the

sheet 10. The part 32 of the embodiment seen in Fig.2 has punch-holes 38 suitable for the rings 40 of ring-binder 34. Punch-holes 38 may be arranged as seen in Fig.2 in a line in groups of three, e.g. suitably for binder 34 to be that known under the Trade Mark FILOFAX.

5 Part 32 may be reinforced around punch-holes 38 as indicated by dotted lines 42. In an alternative embodiment, said opposite portion 18 is stiff and reinforcement 42 is not required. In a further alternative embodiment, said part 32 and at least a neighbouring part 44 of the appertaining portion 18 are reinforced and stiff so that

10 individual punch-hole reinforcement 42 is not required. Both of these last two methods of reinforcement (whole of portion 18 being stiff or parts 32,44 being reinforced and stiff) can be applied to the Fig.1 embodiment in which there are no punch-holes and the sheet 10 is intended for insertion in a spring-binder, or equally in a book to be

15 permanently pre-bound before sale. As a further alternative form of the Fig.2 embodiment for a ring-binder, the material of the sheet 10, apart from the stiff portion 16, can be made of known paper-like plastics material that is tear-resistant. This takes print or writing and, because of its tear-resistant property, may be produced without

20 reinforcement 42, portion 18 then being one with the folded part.

Clearly, the sheet 10 may have any of the further features disclosed in my said prior specification. It is used by unfolding it from the folded position, first by lifting and pulling downwards on stiff portion 16 in the direction indicated by arrow 46 (an intermediate

25 stage of which movement is shown in Fig.1) and then continuing the movement by twisting portion 16 so that its left hand edge 50 comes towards the viewer of Fig.1 and the whole portion 16 is pulled further

over to the right as seen in Fig.2, all as indicated by arrow 48.

Many variations of the present invention and the embodiments of it hereinbefore described will be apparent to people skilled in the art and all such variations are to be considered as falling within
5 the appended claims.

CLAIMS

1. A sheet of material as hereinbefore defined having a first set of concertina folds and, so as to be transverse to these when the sheet is folded with these folds, a second set of concertina folds,
5 the sheet being provided with two diagonally opposite holding portions at segments thereof, which segments are at or near diagonally opposite corners of the sheet and defined by fold/s and/or edge/s thereof, one of the holding portions being stiff and the opposite holding portion having a part extending beyond the remainder of the sheet when folded
10 so as to be suitable to be held in a binder.

2. A sheet as claimed in claim 1, in which said beyond extending part runs substantially the whole length of an edge of the appertaining segment.

3. A sheet as claimed in claim 1 or 2, in which said beyond
15 extending part extends beyond an edge of the appertaining segment which edge is also part of an edge of the sheet.

4. A sheet as claimed in any preceding claim, in which said beyond extending part has punch-holes suitable for a ring binder.

5. A sheet as claimed in claim 4, in which the punch-holes
20 are arranged in a line in groups of three.

6. A sheet as claimed in claim 4 or 5, in which said part is reinforced around the punch-holes.

7. A sheet as claimed in any preceding claim, in which said opposite portion is stiff.

25 8. A sheet as claimed in any one of claims 1 to 6, in which said beyond extending part and at least a neighbouring part of the appertaining portion are reinforced and stiff.

9. A sheet as claimed in any one of claims 1 to 6, in which the material apart from the stiff portion is of paper-like plastics material that is tear-resistant.

10. A sheet of material having two diagonally opposite holding portions, one being stiff and the other extending beyond the remainder of the sheet when folded, and substantially according to any embodiment hereinbefore described.

11. A sheet of material substantially according to any embodiment hereinbefore described with reference to and illustrated in the accompanying drawings.

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ADDED CLAIM

12. A binder or bound volume comprising at least one sheet as claimed in any preceding claim.